

Title (en)
PROCESS AND DEVICE FOR DETERMINING PARAMETERS GOVERNING RESONANCE IN A POWER-CONVERTER POWER SUPPLY.

Title (de)
VERFAHREN UND VORRICHTUNG ZUR ERFASSUNG VON RESONANZMESSGRÖSSEN EINES AN EINEM STROMRICHTER ANGESCHLOSSENEN NETZES.

Title (fr)
PROCEDE ET DISPOSITIF DE DETECTION DE GRANDEURS MESUREES DE RESONANCE D'UN RESEAU RELIE A UN CONVERTISSEUR.

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Application
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- EP 8901525 W 19891212
- EP 89116810 A 19890911
- EP 89116809 A 19890911

Abstract (en)
[origin: WO9103864A1] When a power converter, used to power a locomotive for instance, is connected to a power supply, whose impedance is unknown, the power converter inputs into the power supply interference which can give rise to unwanted resonance in the supply. In the invention, a Fourier transform is carried out on this interference variable, together with a second, electrical variable measured in the connection between the power supply and power converter, in order to measure the frequency spectrum of the return transfer function. From maxima or minima in the measured transfer function, the resistance, capacity and inductance of virtual resonant circuit forming a model simulating the power supply network can be determined. This model and its associated parameters enable power converter operation to be optimised so that it is practically resonance-free.

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Citation (examination)

- 2nd European Conference on Power Electronics and Applications, vol. 2, September 1987, Grenoble, pp. 1239-1244 ; Holtz & Klein : "The propagation of harmonic currents generated by inverter-fed locomotives in the distributed overhead supply system".
- IEEE Proceedings, vol. 133, no. 2, March 1986, pp. 85-94 ; Taufig, Mellit & Goodman : "Novel algorithm for generating near optimal PWM waveforms for AC traction drives".

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CN108879681A; CN102712260A; EP3016256A1; US10003198B2; US8955657B2

Designated contracting state (EPC)
CH DE LI

DOCDB simple family (publication)
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